

Amendments to the Specification:

Please replace the paragraph at page 10, line 24 to page 11, line 7 with the following amended paragraph:

The phase-change material layer 325 is shown as being disposed on the second insulation layer 321 and filling the second opening 323. As a result, the contact area 320 between the phase-change material layer 325 and the first electrode 319 is formed in a sharp, in particular, "V," shape. More specifically, referring to Fig. 3B, the phase-change material layer 325 includes the horizontal part 325H and the vertical part 325V. The horizontal part 325H is placed on the second insulation layer 321. The vertical part 325V extends from the horizontal part 325H and is in contact with the top surface 319Ss of the recessed slope part 319S of the first electrode 319. The tip of the vertical part 325V of the phase-change material layer 325 in the embodiments of Fig. 3B has a conical or "V" shape defined by the recessed slope part 319S of the first electrode 319. In other words, the vertical part 325V of the phase-change material layer 325 includes the vertical sidewall 325Vv and the slope sidewall 325Vs 325Ss. The vertical sidewall 325Vv is vertical to the horizontal part 325H of the phase-change material layer 325 and the slope sidewall 325Vs 325Ss defines a sharp tip of the phase-change material layer 325 extending into the lower electrode 319. Thus, Fig. 3B illustrates embodiments of the present invention where a phase-change material layer and a first electrode have a contact area therebetween that extends into a recess (shown as "V" shaped in Fig. 3B) of the first electrode to provide increased current density adjacent thereto as compared to a flat contact area.